

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)	
KENTUCKY, INC. FOR A CERTIFICATE OF)	CASE NO.
PUBLIC CONVENIENCE AND NECESSITY)	2024-00189
AUTHORIZING THE PHASE THREE)	
REPLACEMENT OF THE AM07 PIPELINE)	

ORDER

On June 14, 2024, Duke Energy Kentucky, Inc. (Duke Kentucky) filed an application pursuant to KRS 270.020 and 807 KAR 5:001, Section 15, seeking a Certificate of Public Convenience and Necessity (CPCN) to construct phase three of a five phase project to replace its AM07 natural gas pipeline. No party requested intervention in this proceeding. Duke Kentucky responded to two sets of requests for information from Commission Staff. On October 8, 2024, Duke Kentucky requested that this matter be submitted on the written record. This matter stands submitted for a decision based on the written record.

LEGAL STANDARD

No utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission.¹ To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.²

¹ KRS 278.020(1). Although the statute exempts certain types of projects from the requirement to obtain a CPCN, the exemptions are not applicable.

² *Kentucky Utilities Co. v. Pub. Serv. Comm 'n*, 252 S.W.2d 885 (Ky. 1952).

“Need” requires:

[A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.

[T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.³

“Wasteful duplication” is defined as “an excess of capacity over need” and “an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.”⁴ To demonstrate that a proposed facility does not result in wasteful duplication, the Commission has held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.⁵ Although cost is a factor, selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.⁶ All relevant factors must be balanced.⁷

³ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

⁴ *Kentucky Utilities Co.*, 252 S.W.2d at 890.

⁵ Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005), Order at 11.

⁶ See *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, *Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky* (Ky. PSC Aug. 19, 2005), final Order

⁷ Case No. 2005-00089, Aug. 19, 2005 final Order at 6.

BACKGROUND

In its application, Duke Kentucky stated that the AM07 pipeline is located in Boone and Kenton counties, Kentucky, is approximately sixteen miles in total length and is the primary artery for Duke Kentucky's natural gas delivery system.⁸ Duke Kentucky stated that the AM07 pipeline was constructed in the 1950's, in accordance with existing regulations at the time, but now is unable to meet regulations promulgated by the U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA) due to its vintage pipe material. Duke Kentucky stated that it needs to replace approximately 13.7 miles of the pipeline to comply with PHMSA integrity regulations.

Duke Kentucky's plan to replace the AM07 gas pipeline was described in its prior rate proceeding, Case No. 2021-00190.⁹ Duke Kentucky developed a five-phase construction plan involving the replacement of approximately 13.7 miles out of approximately 16 miles of pipeline in Boone County and Kenton County, Kentucky.¹⁰ Duke Kentucky obtained a CPCN for Phase One in Case No. 2022-00084.¹¹ In Case No. 2023-00210, the Commission granted Duke Kentucky's application for a CPCN for Phase Two of its pipe replacement plan, consisting of replacement of approximately 3.25 miles of transmission pipeline with 24-inch diameter steel pipeline.¹²

⁸ Application at 1.

⁹ Case No. 2021-00190, *Electronic Application of Duke Energy Kentucky, Inc. for: 1) An Adjustment of The Natural Gas Rates; 2) Approval of New Tariffs, and 3) All Other Required Approvals, Waivers, and Relief* (Ky. PSC Dec. 28, 2021), final Order at 6.

¹⁰ Application at 2.

¹¹ Case No. 2022-00084, *Electronic Application of Duke Energy Kentucky, Inc. for a Certificate of Public Convenience and Necessity Authorizing the Phase One Replacement of the AM07 Pipeline* (Ky. PSC Feb. 24, 2023), Order at 7.

¹² Application at 2.

In this case, Duke Kentucky has applied for a CPCN for Phase Three of its pipe replacement plan, which includes replacement of approximately 4.3 miles of section of AM07 east of the current AM07 section that is currently being replaced via Phase Two. The new route, which is approximately 3.5 miles of this 24-inch section will be replaced with new, industry standard material that will comply with PHMSA regulations. In addition, approximately 3.6 miles of the existing AM07 will be downrated to a distribution pressure system to help continue serving customers in the area. In total, only 3,715' of the existing AM07 will be fully abandoned. Phase Three will be located in areas in which Duke Energy Kentucky is currently already supplying natural gas service and will be placed primarily in a new right of way, east of the current AM07 Section that is currently being replaced via Phase Two.

Duke Kentucky provided the estimated costs of Phase Three of construction as follows:

Task	Cost
Design	\$ 2,400,000
Land	\$ 2,800,000
Construction	\$38,000,000
Materials	\$ 4,900,000
Total:	\$48,500,000¹³

The estimated annual operations and maintenance cost for the new stretch of pipeline is less than \$10,000.¹⁴ Testing required by the federal Pipeline and Hazardous Materials

¹³ Direct Testimony of Bradley A. Seiter (Seiter Direct Testimony) at 8. The projected cost of Phase Three has increased from the \$47,210,100 estimated in Case No. 2023-00210.

¹⁴ Seiter Direct Testimony at 9.

Safety Administration (PHMSA) would be required ten years after the construction of the new pipeline and every seven years afterwards¹⁵ at a cost of \$400,000 to \$500,000 using the Inline Inspection (ILI) tool.¹⁶

Duke Kentucky's stated purposes for the replacement of the AM07 pipeline were twofold. First, Duke Kentucky claimed that the existing, aging A.O. Smith (AOS) steel pipe has a long history of failures due to hard spots in the pipe body along with failures on the longitudinal seam.¹⁷ Duke Kentucky asserted that replacement of this 68-year-old pipe will increase safety and reliability of the pipeline, support future load growth, and maintain pressures.¹⁸ Second, the new pipeline would allow the use of the ILI tool.¹⁹

Absent replacement of the pipeline, Duke Kentucky would either have to pressure test the existing pipeline every seven years or retrofit the pipe to accommodate an ILI tool.²⁰ Duke Kentucky estimated that the cost of pressure testing this segment of pipeline would be approximately \$14,750,000 every seven years.²¹ This option would also require Duke Kentucky to provide a mobile source of temporary liquid natural gas while bypassing portions of the existing pipeline so that service would not be interrupted for lengthy periods of time.²²

¹⁵ 49 C.F.R. § 192.939(b)(6).

¹⁶ Seiter Direct Testimony at 12.

¹⁷ Huey Direct Testimony at 6.

¹⁸ Application at 6.

¹⁹ Application at 5-6.

²⁰ Application at 8.

²¹ Seiter Direct Testimony at 11.

²² Application at 8.

Retrofitting the pipe to allow for the use of an ILI tool would also require the use of temporary gas during the retrofit but further bypassing would not be required once the pipeline can be inspected by using an ILI tool.²³ The estimated cost of this option is \$15,050,000.²⁴

Duke Kentucky stated that the estimated costs for both pressure testing and ILI retrofit would not include the cost of remedying deficiencies in the aging pipeline discovered during pressure testing or ILI testing after retrofit, which cannot be predicted, and which would also increase the downtime of the pipeline and therefore increase temporary gas cost.²⁵

DISCUSSION AND FINDINGS

Having considered the application and all evidence in the record, the Commission finds that the CPCN should be granted. One of the following is necessary to comply with PHMSA regulations: (1) replacement of the AM07 pipeline and use of ILI testing; (2) retrofitting the existing AM07 pipeline for ILI use; or (3) bypassing the pipeline for pressure testing. Although the \$48.5 million in known costs involved in replacement exceeds the \$15 million in known pressure testing costs, the pressure testing would be required every seven years. As a result, the cost of pressure testing would exceed the cost of replacement and ILI testing after 21 years.

Although retrofitting for ILI use would be cheaper than replacement looking only at capital expenditures and PHMSA testing costs, neither the retrofitting nor pressure testing

²³ Application at 8.

²⁴ Seiter Direct Testimony at 12.

²⁵ Application at 8-9.

options account for the uncertain cost of repairing leaks or other deficiencies in the aging pipe that would be necessary every time testing is conducted. These uncertain costs would almost certainly eventually outweigh the capital cost difference as the existing pipeline has already been used beyond its expected useful life. Volatility of natural gas prices could add cost to temporary gas used during pressure testing or ILI retrofitting in the future.

	Proposed Replacement and Maintenance Costs	ILI Retrofitting (Does not include remedial work cost)	Pressure Testing Costs (Not including remedial)
Year 0	\$45,800,000.00	\$29,800,000.00	\$14,750,000.00
Year 7		\$500,000.00	\$14,750,000.00
Year 10	\$500,000.00		
Year 14		\$500,000.00	\$14,750,000.00
Year 17	\$500,000.00		
Year 21		\$500,000.00	\$14,750,000.00
Year 25	\$500,000.00		
Year 28		\$500,000.00	\$14,750,000.00
Total	\$47,300,000.00	\$31,800,000.00	\$73,750,000.00

Replacement also has additional benefits beyond meeting PHMSA requirements and reducing the cost of maintenance required due to continued use of aging pipeline. Fewer leaks as a result of installing new pipeline adds to the reliability of the system as a whole, reducing interruptions. Also, compared to pressure testing, use of the ILI tool also allows for a more detailed inspection. Therefore, abandonment is the least-cost

reasonable alternative compared to removal. Duke Kentucky has therefore demonstrated the need for an expenditure allowing it to comply with PHMSA regulations and has met its burden to establish that replacement of the A07 pipeline is the least-cost most reasonable alternative to meet that need.

IT IS THEREFORE ORDERED that:

1. Duke Kentucky's request for a CPCN for Phase Three of the proposed project described in its application is granted.

2. Duke Kentucky shall immediately notify the Commission upon knowledge of any material changes to the project, including, but not limited to, a material increase in costs and any significant delays in construction.

3. Any material deviation from the construction approved by this Order shall be undertaken only with the prior approval of the Commission.

4. Duke Kentucky shall file with the Commission documentation of the total costs of the projects, including the cost of construction and all other capitalized costs, (e.g. engineering, legal, administrative, etc.) within 60 days of the date that construction authorized under this CPCN is substantially completed. Construction costs shall be classified into appropriate plant accounts in accordance with the Uniform System of Accounts for gas utilities as prescribed by the Commission.

5. Duke Kentucky shall file a copy of the "as-built" drawings, if any, and a certified statement that the construction has been satisfactorily completed in accordance with the plans and specifications within 60 days of the substantial completion of the construction certificated herein.

6. Any documents filed in the future pursuant to ordering paragraph 2 through 5 shall reference this case number and shall be retained in the post-case correspondence file for this proceeding.

7. The Executive Director is delegated authority to grant reasonable extensions of time for filing any documents required by this Order upon Duke Kentucky's showing of good cause for such extension.

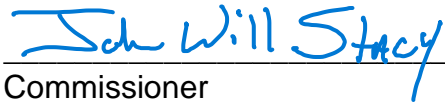
8. This case is closed and is removed from the Commission's docket.

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PUBLIC SERVICE COMMISSION



Chairman



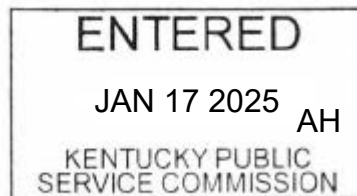
Commissioner



Commissioner

ATTEST:

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